

NAME \_\_\_\_\_

WOOD DUCK  
STILT  
SNOW GOOSE  
COMMON FLICKER  
SANDHILL CRANE  
WARBLER  
NORTHERN PINTAIL  
GREAT BLUE HERON  
HARRIER HAWK  
KINGFISHER  
AMERICAN BITTERN  
AMERICAN WIGEON  
WESTERN MEADOWLARK

CURLEW  
MALLARD  
AVOCET  
GREAT EGRET  
RING-NECKED PHEASANT  
PIED-BILLED GREBE  
KILLDEER  
CANADA GOOSE  
WHITE-FRONTED GOOSE  
CALIFORNIA QUAIL  
RUDDY DUCK  
RED-WINGED BLACKBIRD  
NORTHERN SHOVELER

# CENTRAL VALLEY BIRDS

V	T	A	A	C	T	L	M	R	E	L	E	V	O	H	S	N	R	E	H	T	R	O	N
R	W	O	B	A	A	M	N	O	R	E	H	E	U	L	B	T	A	E	R	G	U	V	S
X	U	O	P	O	S	L	O	P	E	B	E	R	G	D	E	L	L	I	B	D	E	I	P
K	Y	Z	A	A	R	R	I	N	G	N	E	C	K	E	D	P	H	E	A	S	A	N	T
Q	I	O	J	C	K	L	J	F	A	M	E	R	I	C	A	N	W	I	G	E	O	N	S
R	V	N	Q	C	D	N	C	B	O	F	L	S	C	C	U	D	D	L	O	W	L	M	A
D	U	P	G	A	E	K	D	L	N	R	M	E	K	D	J	W	I	H	F	G	K	N	N
P	W	D	H	F	O	R	E	D	W	I	N	G	E	D	B	L	A	C	K	B	I	R	D
E	F	G	D	A	I	E	A	B	B	Z	A	I	C	T	S	B	A	R	R	A	L	O	H
O	X	O	O	Y	I	S	F	H	L	G	Y	B	A	B	U	Y	A	L	B	Q	M	P	I
K	B	A	M	H	D	G	H	L	C	B	A	L	L	Q	V	L	E	B	O	L	B	N	L
N	Y	M	F	G	O	U	H	E	U	A	A	X	A	W	U	G	H	O	D	L	E	O	L
M	B	O	B	O	B	I	C	K	R	O	N	O	O	X	F	A	E	O	C	P	O	R	C
P	E	N	J	A	O	L	J	K	L	A	Q	A	A	F	O	X	I	A	B	A	Q	P	R
M	Z	B	A	N	O	R	T	H	E	R	N	P	I	N	T	A	I	L	Z	M	O	R	A
E	B	K	C	U	D	D	O	O	W	A	P	O	L	I	A	C	D	M	O	A	O	S	N
S	R	E	K	C	I	L	F	N	O	M	M	O	C	W	P	S	T	I	L	T	O	O	E
O	W	H	I	T	E	F	R	O	N	T	E	D	G	O	O	S	E	R	S	S	U	U	O
O	H	A	R	R	I	E	R	H	A	W	K	N	G	O	A	I	F	E	T	X	V	A	V
G	H	G	A	V	O	C	E	T	F	M	K	L	M	S	N	J	M	A	L	L	A	R	D
W	H	K	R	A	L	W	O	D	A	E	M	N	R	E	T	S	E	W	O	V	O	W	B
O	A	M	E	R	I	C	A	N	B	I	T	T	E	R	N	Y	V	X	A	W	A	B	X
N	C	O	B	E	A	D	O	Z	C	G	R	E	A	T	E	G	R	E	T	W	A	Y	A
S	K	I	L	L	D	E	E	R	D	A	E	B	E	S	O	O	G	A	D	A	N	A	C

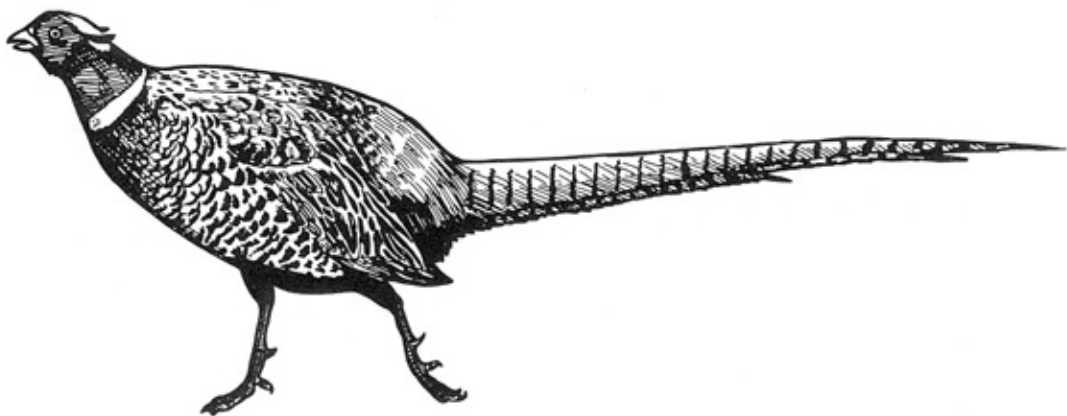
NAME

## BREAK A LEG!

Can you find the hidden Central Valley birds? Good Luck!\*

\*GEESE is hidden in #1

1. GEE, SEAN, YOU'RE JUST NOT RIGHT FOR THE ROLE.
2. NOW, DON'T GIVE ME ANY LIP. HE, AS ANTELOPE AL, WILL BE PERFECT FOR THE PART.
3. AH, AWKWARD LINES ARE HARD TO MEMORIZE.
4. ACCORDING TO THE SCRIPT, THE CROWD, IN PANIC, RAN EVERYWHERE.
5. THE SPOTLIGHT PICKED UP THE INJURED FATHER ON THE STAIRS.
6. "OGRE, BEGONE!" THE ACTRESS CRIED OUT.
7. DON'T START THE FINAL REHEARSALS 'TIL THE DIRECTOR GETS HERE.
8. THE STAR SENT REGRETS THAT HE COULDN'T ATTEND THE OPENING.
9. THE LIGHTS FLICKERED, THE CROWD BECAME QUIET, AND THE PLAY BEGAN.
10. NOW, THE PLAYERS WANT A BIG PARTY TO CELEBRATE THE GREAT REVIEWS!



(Cut this part off if you want to give them a real challenge.)

### WORD BANK:

CROW  
HAWK  
GREBE  
FLICKER

GEESE  
CRANE  
STILT  
SWAN

PHEASANT  
HERON  
EGRET

### **DEFEND YOURSELF!**

Read the following land-use situation. You have 8 minutes to prepare your own decision on the matter and be ready to defend it.

Imagine that you are a citizen who owns a controversial piece of land where a number of wildlife species have their nests. Land developers are trying to buy the land for an amusement park with parking lots and hotels. Wildlife authorities are encouraging you to donate the land as a private wildlife reserve. Consider both sides of the issue carefully.

You can make up your own facts and figures to suit your argument.

1. What factors do you have to take into consideration. (What will you be paid for the land? Will you receive a tax write-off if you donate the land? How much?)
2. How are you using this land now? (farming, ranching, not in use, etc.)
3. Do you think this is a good use of your land? Why or why not?
4. What is your decision and why?

## **WHAT WILL HAPPEN TONIGHT? - A Town Meeting**

### **OBJECTIVES:**

Students will gain knowledge of conflicting interests when public policy is being formed. This will be done as the students participate in a public process to decide how land is to be used.

### **MATERIALS:**

Identification cards for each presenter, and a permit for the City Council to hold

### **TIME:**

About 20 to 40 minutes for the presentation

### **READ TO YOUR CLASS:**

Mom and Dad are worried. Whenever there is a town meeting, it causes such a fuss that no one gets anything done for at least three days before and after it happens.

The last open area near the town might be sold - the old marsh. Fifteen acres of it would be sold to Dan the Developer for a shopping center, like the one on the other side of town. It will have department stores.

Everyone around \_\_\_\_\_ (your town) remembers growing up with the marsh nearby. It was always good for a great adventure or two, even if Mom didn't appreciate the bugs and frogs you brought home in a jar. You were even successful in raising the tadpole eggs to frogs if you remembered to replace the pond water often enough. You fed the ducks that gathered there in the winter months. Even though you fed them slowly, the seed seemed to disappear long before you were ready to go home. The marsh was a great place.

It sure will be hard to see the old marsh go, but Dad said it would be good for business to have some new stores. Plus, you wouldn't have to ride your bike all the way into town. It would be a lot easier.

I wonder what will happen at the town meeting tonight? People want to know if Dan will get a permit to use the land the way he wants to. This might be the last year for tadpoles.

**THE PLAYERS:**

*Barbara the Biologist* - from the Department of Fish and Wildlife

*Dan the Developer* - missed his flight and is late to the meeting

*Mr. Bird* - represents the Bird Watchers' Society

*Mr. History* - from the Historical Society

*Pam the Planner* - from the town planning office

*Ms. Politician* - running for mayor

*Sam the Sportsman* - represents those who hunt and fish in the marsh

*Brenda the Businesswoman* - represents the local business community

*City Council* - will decide the best use for the land, and give the permit to Dan if the members (3) agree with the plan

*Citizens* - both happy and upset; all are interested and full of questions

*Timekeeper* - to keep everyone short-winded - 2 minutes each for the presenters

**PRESENTATION:**

Each presenter will have 2 minutes to deliver a short speech. Emphasis is on the power of a few well-delivered sentences.

**QUESTIONS FROM THE AUDIENCE:**

As long as order prevails

**DECISION TIME !**

After the presentations and any comments from the audience, the City Council adjourns to take a short break and make its decision. The decision is announced.

**DE-BRIEFING:**

"Now we have to step back from our role-playing. We are the \_\_\_\_\_ class from \_\_\_\_\_ (school). I want you to think about certain things:

1. What additional information would have helped you plan your speech?
2. Where would you go to get this information?
3. Who were the leaders during the City Council Meeting?
4. Were you assigned to speak for a group you don't agree with?  
(Point out that other people have different needs and ideas, and this might be a way to identify them.)

Simulation games like this one do three things:

1. Clearly explain a problem - The problem we discussed was \_\_\_\_\_.
2. Show us that things can influence a decision. What things?
3. Show us that there are people interested in the decision. Groups interested in our decision would be: \_\_\_\_\_."

## Barbara the Biologist

Remember Barbara, you stand for the fish and wildlife of the area.  
You represent the creatures who cannot speak for themselves.

Could the marsh area be left alone as habitat for the birds?

The ducks use the marsh ponds in the winter and spring when it is  
too cold to stay up north in Alaska, Canada, Washington and Oregon.  
Curlews, killdeer, stilts and avocets love to hunt for food in the mud,  
and the geese love the grassy areas.

Remind people that the marsh is home for many other kinds of fish  
and wildlife too.

Long live the wildlife!

## Dan the Developer

Remember Dan, you stand for all the investors from San Francisco.

They will put a lot of money into this project. They expect you to convince the people of the town, especially the City Council, that the shopping center will bring jobs for the town and better and easier shopping for the people.

The town has really grown. It needs a shopping center on the north side of the town.

You and your investors will all make a good profit if the shopping center is built.

Go for it!

## Mr. Bird

Remember Mr. Bird, your wonderful birds are in danger. As this year's president of the Bird Watchers' Society, it is up to you to save them! If Dan the Developer puts in that shopping center, not one bird will return to the area. All that habitat will be lost forever. Not only are there very few areas left for the birds, there are very few places left for people to watch birds and enjoy nature and the outdoors. Hang in there for your birdwatcher friends and your feathered friends!



## Mr. History

Remember Mr. History, that you stand for all the old places that are left in this town, and, there aren't many left.

The first family to settle in the area built their barn on the edge of that marsh, and it is still standing today.

That barn is over 100 years old and should be preserved in some way, not torn down.

And of all the bad luck, it is on the piece of land that may be sold to Dan the Developer. There is no way he is going to let the barn stand.

You've got to convince the City Council members to grant the permit ONLY if the barn can be saved.

Mr. History, fight for the past!

## Pam the Planner

Remember Pam, you are to look at all of the town's needs, because your job is to help find the best solution for all of the town's citizens.

The town really needs the new jobs the shopping center will bring.

However, you also have to think about all of the new roads a shopping center will require. How will the town pay for them?

The town needs to clean up the river which flows by the marsh and on into town. The marsh could be a natural water filter to remove silt and absorb pollutants. Does the marsh provide other benefits people are forgetting?

Is there a way to build the shopping center so that all of the marsh won't be lost?

Pam, the City Council members want to know what you think, so think hard.

## Ms. Politician

Remember Ms. Politician, that you want to represent the town as mayor next year, so you had better start lining up the votes now!

How can you stand for both the shopping center, which will put more people to work, and the people like Mr. Bird, who has all of his bird-watcher friends ready to vote for your opponent.

So, just think of a plan that will make Dan and the nature lovers happy.

Now is the time to show this town what a leader you can be!

## Sam the Sportsman

Remember Sam, you represent all of the people of the town who like to fish and hunt in the marsh.

Men and women interested in outdoor sports such as hunting and fishing want to protect natural areas where fish and wildlife live.

There are fewer and fewer places to go and enjoy these activities with your children or friends.

You want to save those places that are left.

You represent local businessmen and women and you want the town to grow and prosper.  
The shopping center would bring jobs and money into the town, and you think that would be good for everyone.  
You support Dan the Developer and want the shopping center built.

Brenda the Businesswoman

## City Council Member

Remember City Council member, that you were elected by the people of the town to represent them - all of them.

You must listen carefully to all the speakers and people from the audience before you decide whether to grant the permit to Dan.

You might grant the permit only if some changes are made in the plans. What would those changes be? If you give him the permit so the sale can go through, you had better be ready with good reasons why.

The town is waiting for your answer.

## Timekeeper

Remember Timekeeper, the folks at the town meeting are going to be excited.

It is your job to see that each of the eight speakers does not go over the time limit of *2 minutes* each.

Questions from the audience should be short - about 20 seconds each.

The City Council members are counting on you to help keep order tonight.

Good luck!!

Permit



## **A Land Use Simulation**

Set the stage for this investigation by reviewing quickly what will take place. For example: "During this activity we will participate in a simulation game concerning land use in a fictitious community and analyze what we have done".

### **Objectives**

Using a simulation game, the students will be able to identify and defend a particular land usage, using certain environmental factors as justification for that usage.

The students will become familiar with a form of political process and work within that process using compromise and problem solving skills to achieve their goals.

The students will receive the necessary information prior to decisionmaking.

Students should be able to describe how such decisionmaking could affect their lives, community, and the management of the environment.

### **Length of Lesson**

You may want to provide time for research and possible interviews prior to conducting this exercise. Allow at least 45 minutes for the simulation.

### **Materials**

- Chalkboard
- Chalk
- Marking pens
- Large pieces of paper
- Task cards

### **I. Naming, Recording, and Classifying Possible Uses of Land**

A. Distribute TASK A. Read the problem to the group and then have them read the given information on TASK A and list possible uses of the land to meet the city's needs.

NOTE: When most people have started to write down uses on TASK A, go ahead with question 1.

B. The problem is to identify some possible uses for the 1-square mile (640 acres) of county farmland which is 4 miles northeast of the city. It is now available for the city's use.

**Questions and Discussion:**

*Accepting  
Supporting  
Encouraging  
Time to think  
Clarifying*

1. Ask "What are some possible uses for the undeveloped land?" As people respond, write all comments just as they are said. Don't paraphrase them, if they are too wordy, ask: "How shall I write that on the chart?" List all suggestions, specific or general. Number the items as you go to simplify identification later. When you feel that you have enough material, go on to question 2.
2. Ask: "Which of these possible uses are similar?" Designate similar uses by letters or symbols, or colors. When most are designated, or the group seems to run out of thoughts, STOP. Change items among categories if the participants change their minds. Don't get bogged down in the details of grouping. For example, if some people think one use should be in another category, then put that use in both categories and go on to the next step.
3. Ask: "What label could we give to all the items in the same category?" For example, Recreation, Industrial, Utilities, Housing, Commercial. These are group interests you will represent.

**II. Developing and Giving Presentations**

- A. Have the group count off into the number of land use categories. Groups should not be more than eight persons. Assign one of the categories to each group for them to represent.
- B. Pass out TASK B and inform the participants they have 10 minutes to list and analyze the advantages and disadvantages of possible uses for the vacant land in the assigned category. They may consider those listed on the board plus any other possible uses they can think of in their category. It is important to stress that this task is to just analyze the uses of the land.

*10 minutes pass*

- C. Tell the groups that their next task is to develop a land use plan for the area in their assigned land use category (about 10-15 minutes).

*Groups begin planning*

- D. An Unexpected Turn of Events: Five minutes into their planning, make the following two announcements:

1. "We have just received word that due to the current workload from reading environmental impact statements, the members of the Board of County Commissioners have all resigned. Each group has 1 minute to elect one member to represent them on the Board."

### *A Land Use Simulation*

2. Have another teacher, aid, or parent helper, take the new Board to another room and pass out TASK C. Review TASK C with them.
  - a. Have them concentrate on evaluation criteria first.
  - b. Have chairperson read and stick to the announcements at the bottom of TASK C in order to keep the process moving.
3. Make this announcement after the Board leaves the room. You may have to give extra time for everyone to finish.

"You have about 10 minutes to finish your plan and develop a 2-minute presentation to be made to the County Board of Commissioners. Your 2-minute presentation must include a visual display, such as a land use map, as a part of your presentation and more than one person in each group must participate in making the presentation."  
(Pass out felt pens and large paper.)

E. When all groups are ready, have the County Board enter the room and sit at the front. Appoint a timekeeper to cut off all presentations at 2 minutes (give a 1-minute warning). Have chairperson make announcements listed on TASK C.

F. When presentations are finished, the board returns for 5 minutes to select the best proposal.

G. While the Board is meeting, each small group develops a list of criteria they think should be used in choosing the plans submitted. (Pass out TASK C to use in developing the criteria.)

H. County Board reenters the room and reads their criteria aloud.

I. County Board announces their decision and gives their reasons. Board adjourns.

NOTE: Person in charge must move rapidly to the next question to avoid shouting matches between losing groups. Have Board members return to the groups who selected them. The main purpose is to evaluate the process, not to get bogged down in the content of the issue.

## Questions and Discussions

Accepting  
Supporting  
Encouraging  
Time to Think

### Debriefing:

"Now we have to remember to step back from our role-playing. We are the \_\_\_\_\_ class from \_\_\_\_\_ School. I want you to think about certain things as we debrief:

A. What additional data would you like to have had for planning your group's proposal?

If needed, list on board; e.g., topography, vegetation, economy of area, railroad, shopping center, adjacent land, climate, soil survey, historical information, flood plain, wildlife, interest of board, money available, educational needs, regulations by State, existing zoning, political climate, population information (age needs, race, jobs).

B. Where would you go to collect information on these topics?

C. Point out to the group that this is one of the most important parts of the activity because it emphasizes that we need a variety of information and data before we can intelligently make a land management or environmental decision to best meet the needs of people and their environment.

*If there is time, and it is pertinent to the situation, you may want to ask the following questions:*

D. Did new leaders emerge during this session? What factors enabled this to happen?

E. Did your group work as a team? What did your group do to insure participation by all members of the group?

F. Were you assigned to a group or interest you did not want to represent? How did you feel? Point out that many times we overlook the fact that other people have different needs and ideas, and this might be a way to identify them.

*Simulation games like this one do three things:*

1. Clearly define a problem. The problem we discussed:
2. Factors influence a decision. Factors influencing use:
3. There are people interested in the decision. Groups interested in our decision:

## TASK A (Work by yourself)

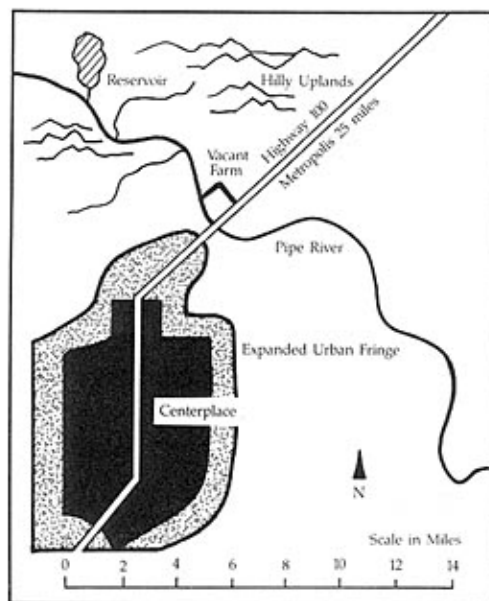
Read the background information for Centerplace City, and then list some possible uses of the vacant farmland.

"One square mile of unused county farmland, four miles northeast of the city, is now available for the city's use." (640 acres)

### Background Information: Centerplace City

- \* The population is 250,000 and rapidly increasing.
- \* The city's boundaries are being extended, but the suburban fringe is expanding even more rapidly.
- \* The rapid population growth is accompanied by demands for more housing, more jobs, additional city service, and recreation areas.
- \* The power for industrial uses, adequate public transportation, and a skilled labor force is available.
- \* The city is located near forests, which are to the north.
- \* The land to the east is devoted mainly to farming.
- \* The Pipe River is unpolluted and is the source of irrigation water as well as the municipal water supply.
- \* The river is too small for freight transportation, but logs could be floated on it.
- \* The gravel bed of the river is appropriate raw material for concrete manufacture.
- \* The present sewage treatment plant and garbage disposal area are at maximum capacity.
- \* The citizens of Centerplace are concerned about the maintenance of a scenic regional environment.
- \* The County Board of Control is the authority for land zoning, and many citizens' groups are developing to influence zoning decisions.

List possible uses of the land below:



*A Land Use Simulation*

**TASK B**

**Group Assigned Category of Land Use**

Your task is only to analyze and list possible consequences of different land uses within your assigned land use category, not to decide which is the best use.

**Use**

**Advantages  
to Land/People**

**Disadvantages  
to Land/People**

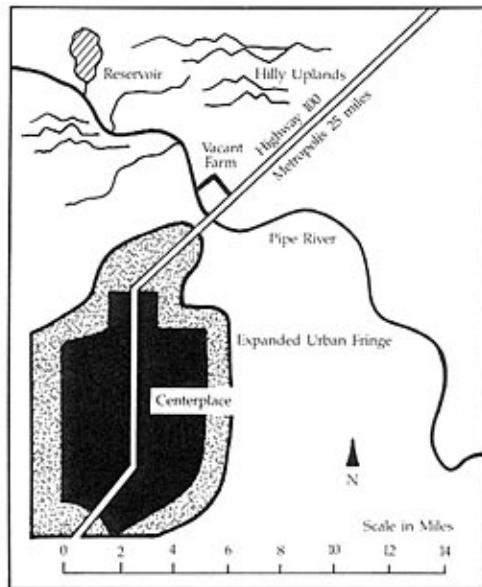
## TASK C

1. Using the information given below:
  - a. Develop criteria to evaluate the proposals. Consider jobs, recreation, wildlife, etc. Take about 10 minutes.
  - b. You will give criteria for assigning a letter grade A-F for each presentation.

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### Background Information: Centerplace City

- \* The population is 250,000 and rapidly increasing.
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- \* The citizens of Centerplace are concerned about the maintenance of a scenic regional environment.
- \* The County Board of Control is the authority for land zoning, and many citizens' groups are developing to influence zoning decisions.



2. Elect a chairperson to preside during the group presentations and to run the County Board meeting in an orderly manner. Your chairperson makes these announcements to everyone:
  - a. Because of time constraints, there will be no rebuttal after presentations.
  - b. The Board may ask 2-3 clarifying questions after all presentations.
  - c. You will have 2 minutes to give your presentation. You will be given a warning when you have 1 minute left.

**TASK C, page 2**

List Your Criteria Here:

- 1.
- 2.
- 3.
- 4.
- 5.

Land Use Group

Grades You Assign



## **MINI-REPORT--THE DUCK STAMP**

**OBJECTIVES:** Students will become aware of loss of waterfowl habitat through a student presentation, and become actively involved in a simulated competition on behalf of habitat preservation.

**MATERIALS:**

"The Duck Stamp Story" - brochure  
Grade Sheets - For the teacher and the student presenter  
Student Assignment  
Overhead Transparency  
Entry Forms  
Duck Sheets - Ducks from the Central Valley of California  
Scratch Paper - (Have available for initial sketches) and pencils

STUDENT NAME \_\_\_\_\_

**GRADE SHEET - teacher copy**

**Preparation:** It appears that the brochure has been read and some of the material committed to memory.

**Delivery:** Adequate volume and clear enunciation -

Posture -

Variety in tone -

Any gestures -

Opening and closing remarks -

**Overall Grade:**

**Additional Comments:**

STUDENT NAME \_\_\_\_\_

**GRADE SHEET - student copy**

**Preparation:** It appears that the brochure has been read and some of the material committed to memory.

**Delivery:** Adequate volume and clear enunciation

Posture -

Variety in tone -

Any gestures -

Opening and closing remarks -

**Overall Grade:**

**Additional Comments:**

## STUDENT ASSIGNMENT

- Read the brochure "The Duck Stamp Story."
- Read the rest of this assignment, and meet with the teacher to determine the judge and prizes for the competition before preparing your presentation.
- Prepare an 8-minute oral presentation for the class. It will be a sales pitch and a challenge to your audience. Your comments may cover these topics, and you may include others as well:

### 1. History of the Duck Stamp

- Decline in waterfowl and a need to save bird habitat.
- Migratory Bird Conservation Act of 1929.
- Darling's idea of a required stamp for hunters.
- Migratory Bird Hunting Stamp Act of 1934.
- Artists' competition since 1949 - prints of the winning drawing are sold to eager collectors.
- 313 million dollars from the stamp sales have purchased and saved 3.7 million acres of wetland for waterfowl.

### 2. Problems Still Exist - Include these facts:

Decline of waterfowl habitat in the Central Valley of California:

- 95% of wetlands have been lost; nowhere in the country do so many birds depend upon so little land.
- Of the 280,000 acres of wetlands left here, 90,000 are unprotected.
- **Show the overhead transparency.**

Point out that much of the private unprotected wetlands have been lost. Funds could purchase and save more of these wetlands for bird habitat.

### 3. Here's the Pitch: (fictitious)

"Here's how we can help: local participation in the state duck stamp competition has fallen off this year. (Along with the duck population.) As part of a local effort, our school has been chosen to be the first in a new competition involving students.

Our teacher \_\_\_\_\_, has given me the authority to grant \_\_\_\_\_ (class privilege or prize) to the top 5 finalists in the class, and the first-place prize will be \_\_\_\_\_. Judging will be done by \_\_\_\_\_.

(Hold up duck entry forms.) "In the corner of your entry form is a copy of an actual duck stamp."

**(Hold up Duck Sheets with ducks of the Central Valley.)**

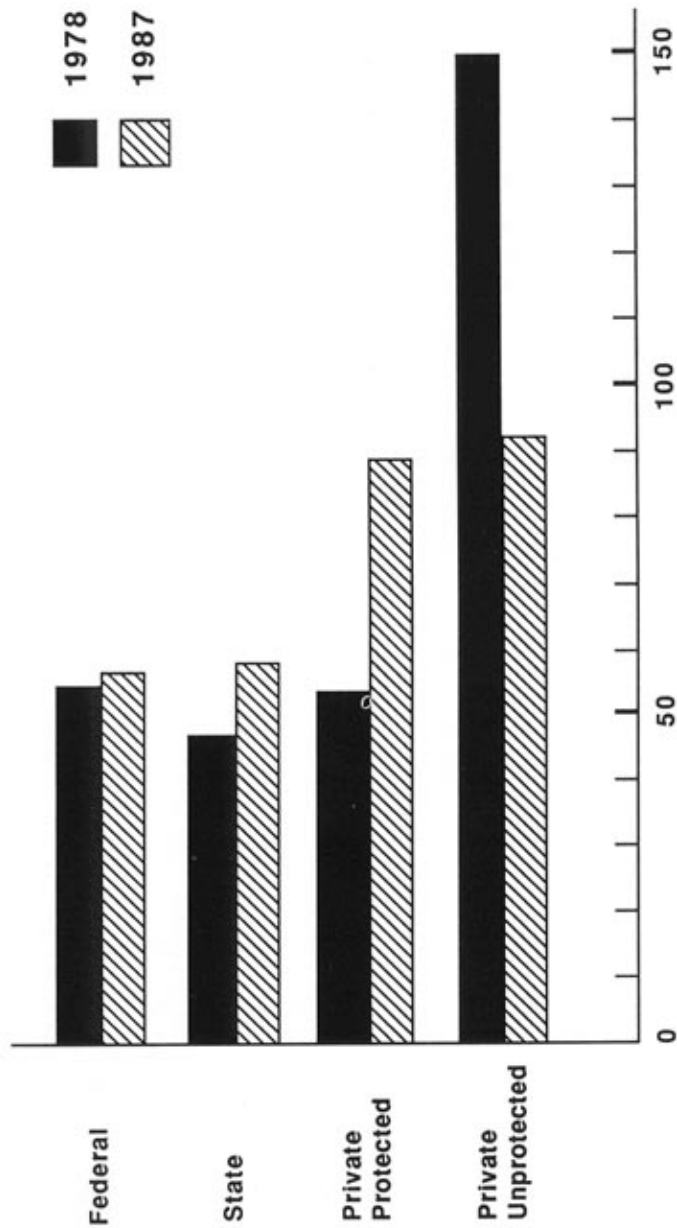
"This sheet shows you the ducks that winter in the California Central Valley and use the Pacific Flyway. The sheet and the outlines on the bottom of your entry form will get you started. You have 12-15 minutes to sketch a rough draft on the scratch paper I will give you. The final copy of your duck stamp is due\_\_\_\_\_."

*The teacher gives the following guidelines for grading:*

1. Participation
2. Design Layout
3. Degree of Achievement

Allow time for questions before passing out scratch paper, Duck Sheet, and entry forms.

WHAT'S LEFT AND WHO OWNS IT?

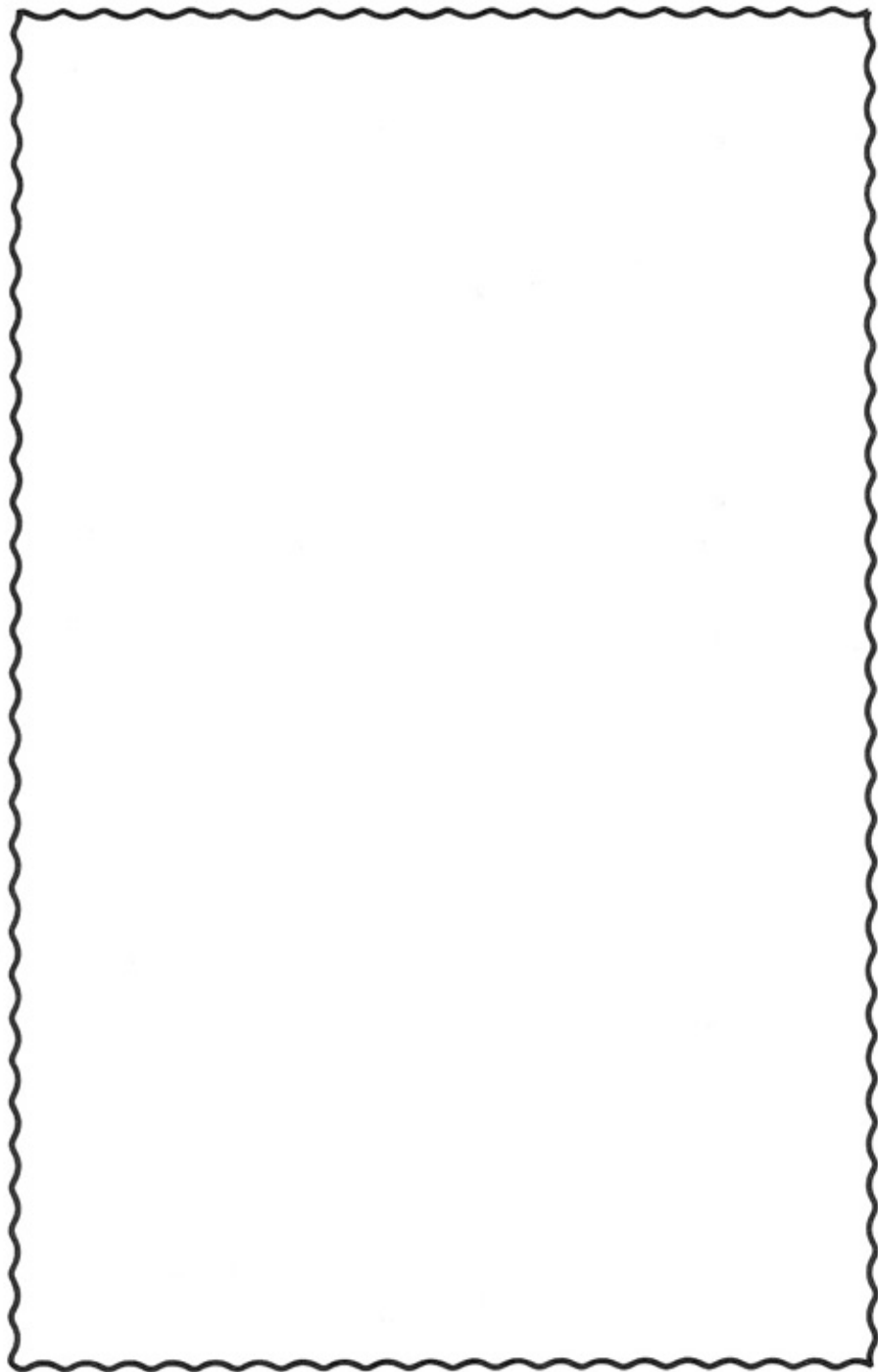


Comparative Status of Wetlands in the Central Valley of California, 1978 and 1987

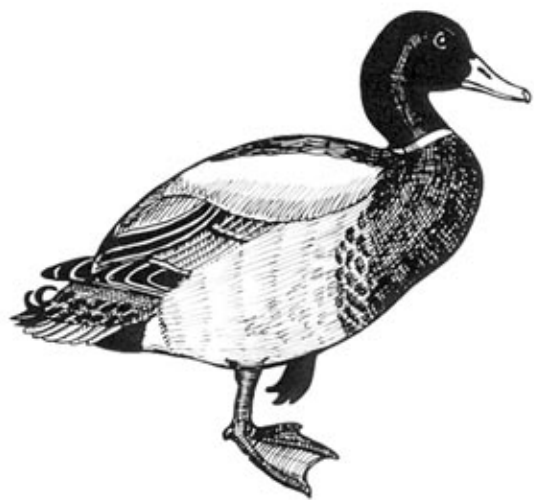
Name \_\_\_\_\_

## DUCK STAMP DESIGNING

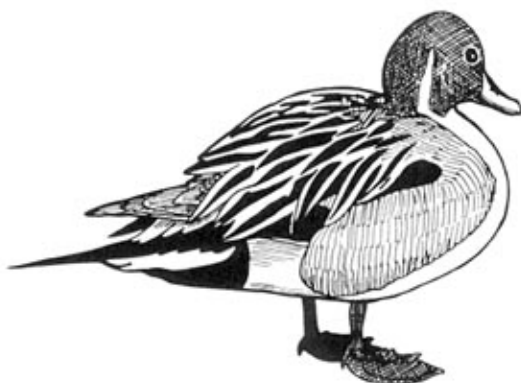
Hunters buy a ticket to hunt. Other people who are also interested in birds buy it too. The ticket is called a Duck Stamp, and the money from selling the stamp buys land for the birds. Draw your own Duck Stamp here:



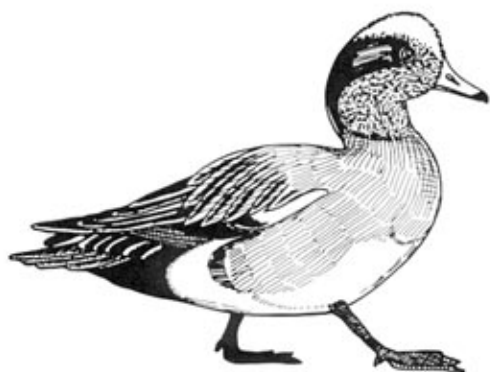
# Ducks of the Central Valley



Mallard



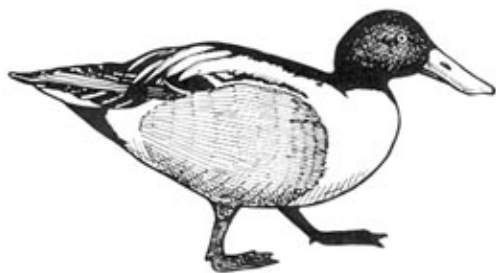
Northern Pintail



American Wigeon



Wood Duck



Northern Shoveler



Ruddy Duck

# The Duck Stamp Story



The Federal Duck Stamp Program is one of the most successful conservation programs ever initiated. Since 1934 millions of Duck Stamp dollars have contributed to preserving about 4 million acres of wetland habitat in the National Wildlife Refuge System.

When the explorers from Europe first set foot upon the continent of North America, the skies and marshes were filled with millions of ducks and geese and the woods and plains abounded with an astonishing variety of wildlife. The native Indians, in their many centuries of dwelling in this plentiful land, took from it only what they could use and saw the flocks and herds flourish and multiply.

It took the explorers and the thousands of settlers who followed them only a little over 400 years to deplete these great flocks and herds, reducing some by millions and completely extinguishing others. Migratory waterfowl, especially, were decimated as market hunters and overly eager sports enthusiasts laid waste to the vast flocks. Millions of acres of marshland were drained to feed and house this country's ever-growing population, greatly reducing waterfowl breeding and nesting habitat.

In addition, the elements joined forces to reduce wetland areas as the central portion of the continent was devastated by a prolonged drought

of historic proportions. The Dust Bowl years left that area withered and unproductive, and even the lush timbered swamps of the South and the marshes of the Gulf Coast suffered. Migration rest areas and wintering grounds became endangered.

As early as 1913, Congress recognized the importance of waterfowl management and protection with the enactment of the Weeks-McLean Law. In 1918, the Migratory Bird Treaty Act was passed and protection from commercial exploitation was afforded to both migratory waterfowl and other species of birds.

By the late 1920's, the waterfowl situation became critical and the descendants of the early explorers and settlers realized that urgent action was required to remedy the problem. A very significant step was taken when the U.S. Congress enacted the Migratory Bird Conservation Act of 1929. The law expanded the existing National Wildlife Refuge System established in 1903 and provided authorization for the acquisition of wetlands for waterfowl habitat. The law was, however, only a stopgap measure, as it made no provision for the procurement of funds with which to purchase the land.

J.N. "Ding" Darling, nationally-known political cartoonist, led a drive by conservationists to remedy the funding problem. Darling, who was keenly interested in hunting and wildlife, watched in dismay as the waterfowl habitat in his own state was severely reduced. Darling put his own artistic talents to use and frequently published biting cartoons depicting the destruction of this nation's waterfowl and their habitat.

Undoubtedly, though, Darling's most significant contribution was the concept of a Federal revenue stamp to generate the necessary funds for the acquisition of waterfowl habitat. His idea became reality on March 16, 1934, when Congress passed the Migratory Bird Hunting Stamp Act which required every waterfowl hunter over age 16 to annually purchase and carry a Federal Duck Stamp. Proceeds from the sale of Duck Stamps were earmarked to buy and lease waterfowl habitat.



Black duck at home in a fresh water marsh.  
Wildlife NWR, New Hampshire

© Mark Whelan/USFWS



First Federal Duck Stamp, 1934-35. Designed by J.N. "Ding" Darling



It seemed only fitting to President Franklin D. Roosevelt that Darling be commissioned to design the first Federal Duck Stamp. Roosevelt had previously appointed Darling as Chief of the Bureau of Biological Survey, predecessor of the present U.S. Fish and Wildlife Service. Darling produced a small pencil sketch of a pair of mallards coming in over a marsh pond. In August 1934, the Duck Stamps went on sale and a total of 635,000 were sold at one dollar each.

The price of Duck Stamps has increased over the years with the decreasing availability of wetlands. Waterfowl habitat which once sold for as little as \$1 an acre now costs thousands of times that price. A collector who had purchased, at the issue price, each of the 59 stamps by 1992 would have spent a total of \$242. This investment would presently be worth over \$4,000. That percentage increase has turned many stamp purchasers into avid collectors. All stamps not sold are destroyed three years after issue, thus preserving the value of the stamps purchased by collectors.

Most of the annual stamps depict waterfowl in their natural environment. Until 1949, a nationally-recognized wildlife artist was commissioned annually to produce a Duck Stamp design. Since that year, however, an annual Duck Stamp design is chosen by a panel of waterfowl and art experts. This is the only annual art competition sponsored by the Federal Government, and the number of annual entries varies between 600 and 1,000.

Any artist can enter the contest by submitting a 10 x 7 inch waterfowl design and paying an entry



fee. The winner receives a pane of stamps bearing his or her design and maintains the right to sell prints of the winning artwork which are eagerly sought by collectors.

The Federal Duck Stamp Program is one of the most successful conservation programs ever initiated. Over 98¢ of every Duck Stamp dollar goes directly into a fund used solely to acquire wetlands for North American waterfowl. These lands become a part of the National Wildlife Refuge System and also benefit many other species of plants and animals.

The focus of the program has changed over the decades. The goal in recent years has been to preserve key wintering and breeding habitats in each of the four major north-south migratory waterfowl flyways, particularly those most threatened by development. Efforts are also underway to save areas needed by species whose numbers are low or declining, such as black ducks, cackling Canada geese, canvasbacks, mallards, Pacific brants, Pacific white-fronted geese, pintails, red-heads and wood ducks.

The Duck Stamp Program also aids wildlife other than waterfowl. One-third of the nation's endangered or threatened species find food and



White-tailed deer drinking. Quenna NWR, Kansas

shelter in wetlands conserved under the program. Coastal wetlands also provide spawning and nursery habitat for our nation's fishery resources.

In addition to providing valuable fish and wildlife habitat, wetlands help to maintain ground water supplies and water quality, protect shorelines from erosion, store floodwaters, trap sediments that can pollute waterways, and modify climatic changes.

Possession of the most recent Federal Duck Stamp (must be signed in ink across its face) provides free admission into all National Wildlife Refuges where entrance fees are charged. It is also one way to support the goals of The North American Waterfowl Management Plan, an historic 1986 Agreement between the United States and Canada which sets forth a course of action for both countries to take to ensure the continued survival of abundant populations of ducks, geese and swans.

The success of the Federal Duck Stamp Program and the North American Plan requires the continued strong commitment, creativity and hard work by the Federal governments of these two nations, state and local governments, private organizations, businesses and individual citizens.

The purchase of a Federal Duck Stamp provides an opportunity for every citizen to make a small investment in an enormous endeavor—the preservation of our natural heritage.



U.S. Department of the Interior  
U.S. Fish and Wildlife Service

## Order Your Duck Stamps Today

Please send me the following Federal Migratory Bird Hunting and Conservation Stamps (Duck Stamp):

Qty.		Total
_____	1990-91 Black-bellied Whistling Ducks @ \$12.50 each = *	_____
_____	1991-92 King Eiders @ \$15.00 each =	_____
_____	1992-93 Spectacled Eiders @ \$15.00 each =	_____
_____	1993-94 (Do not order before July 93) @ \$15.00 each =	_____
_____	Shipping and Handling charges per order	_____
_____	*All 1990-91 stamps not sold by 6/30/93 will be destroyed.	_____
_____	Quantity Total	Total Amount \$

Enclosed is my check or money order for \$\_\_\_\_\_.  
Made payable to the U.S. Fish and Wildlife Service.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Mail to: Federal Duck Stamp Office  
1849 C Street, N.W., Suite 2058  
Washington, D.C. 20240

## Duck Stamp Collection

The Duck Stamp Collection includes a data sheet on each duck stamp issued since the first one in 1934. Each sheet includes a photograph of the stamp and original art, short biography of the artist, names of the designers and engravers, inscription, first date of sale, and number of stamps sold. Subscription service provides the entire collection to date plus one update per year for an indefinite period of time.

Subscriptions to the Duck Stamp Collection are \$12 (\$15 foreign) each and \$2.50 for the binders (1992 prices). These are made available through the Government Printing Office. Call Order and Information Desk at (202) 783-3238 to verify prices.

Subscription (s) for the Duck Stamp Collection = \_\_\_\_\_  
(Stock #924-001-00000-5)  
Binder (s) to hold my Collection = \_\_\_\_\_  
(Stock #024-010-00684-6)

Enclosed is my check or money order for \$\_\_\_\_\_.  
Made payable to the Superintendent of Documents.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Mail to: Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20402-9325

## MINI REPORT--MIGRATION

### OBJECTIVES:

The class will become aware of ancient beliefs and current understandings regarding bird migration. This will be done through a student presentation, and the presenter will then give an oral quiz to the class based on the presentation.

### MATERIALS:

2 articles on bird migration and an overhead transparency of the Pacific Flyway

### BACKGROUND INFORMATION:

See attached articles.

STUDENT NAME \_\_\_\_\_

### GRADE SHEET

**Preparation:** It appears that the articles have been read and some of the material committed to memory.

**Delivery:** Adequate volume and clear enunciation -

Posture -

Variety in tone -

Any gestures -

Opening and closing remarks -

**Overall Grade:**

**Additional Comments:**

## STUDENT ASSIGNMENT

Read the two articles on bird migration. Look up and define two new terms that are used in the articles. Explain one of them during your presentation.

Please list the two terms you found and their definitions.

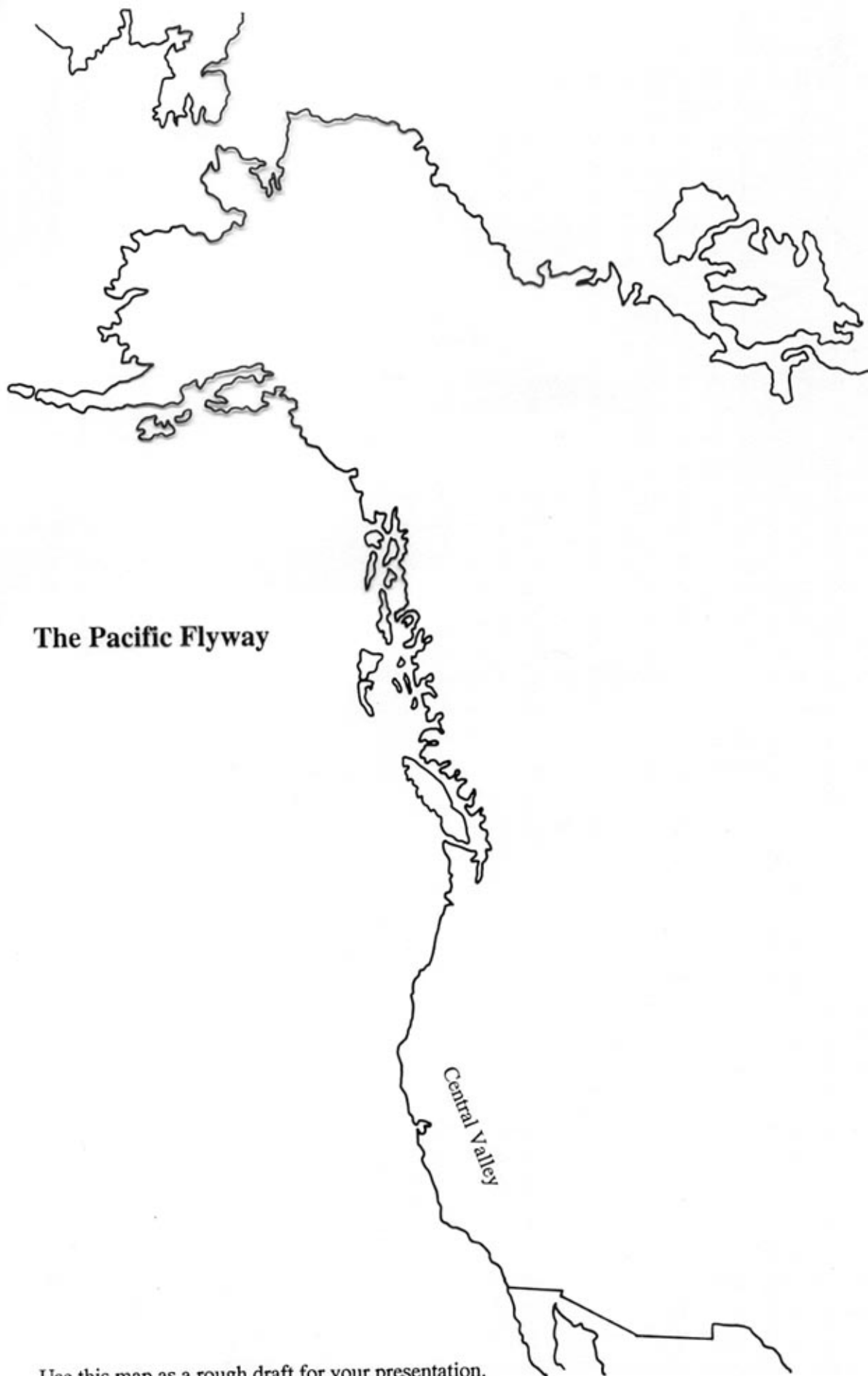
\_\_\_\_\_

\_\_\_\_\_

Which one will you explain to the class? \_\_\_\_\_

Prepare an oral presentation on migration in which you will use the overhead projector and the transparency of the Pacific Flyway.

1. Begin with ancient myths, and be sure to define migration. These will be your opening remarks.
2. Then discuss what we know now about migration:
  - Why does it happen?** Give all the theories presented in the articles.
  - How?** Discuss ways of migrating. Show migration for spring and fall on the transparency by using arrows or symbolic birds.
  - When?** Discuss time of year and time of day.
  - Where?** Tell what areas the birds favor and what they avoid as they fly along the Pacific Flyway.
3. Length of Presentation: 5-10 minutes
4. When you are finished, ask the class 3 or 4 quiz-type questions based on the information you have shared.
5. Close with appropriate remarks regarding the topic.



Use this map as a rough draft for your presentation.



## **MIGRATION**

### **History and Scope**

The migrations of birds were probably among the first natural phenomena to attract the attention and arouse the imagination of man. Recorded observations on the subject date back nearly 3,000 years, to the times of Hesiod, Homer, Herodotus, Aristotle, and others.

Of observers whose writings are extant, Aristotle, naturalist and philosopher of ancient Greece, was one of the first to discuss the subject of bird migration. He noted cranes traveled from the steppes of Schythia to the marshes at the headwaters of the Nile, and pelicans, geese, swans, rails, doves, and many other birds likewise passed to warmer regions to spend the winter. Aristotle also must be credited with the origin of some superstitious beliefs that persisted for several centuries. One of these, the hibernation theory, survived for more than 2,000 years, and it was not until early in the nineteenth century that its acceptance as an explanation for the winter disappearance of birds was almost completely abandoned. Some early naturalists wrote fantastic accounts of the flocks of swallows allegedly seen congregating in marshes until their accumulated weight bent into the water the reeds on which they clung and thus submerged the birds. Probably the most remarkable theory advanced to account for migration is contained in a pamphlet, "An Essay toward the Probable Solution of the Swallow, when they Know and Observe the Appointed Time of their Coming", mentioned by Clarke (1912: v. 1, 9-11) published in 1703. It is written "By a Person of Learning and Piety," whose "probable solution" stated migratory birds flew to the moon and there spent the winter. Astronauts have so far failed to verify this.

The scope of the migration phenomenon is worldwide, not simply limited to the United States, the Northern Hemisphere, or the world's land masses.

### **Advantages of Migration**

Why should a bird subject itself to the rigors of a long migratory journey twice a year? Migration makes it possible for some species to inhabit two different areas during the seasons when each presents favorable conditions. If it was not advantageous to make the trip twice a year, natural selection would have eliminated the tendency, but bird migration has become the rule over much of the world rather than the exception. By withdrawing in the spring to regions uninhabitable earlier in the year, migrant species are generally assured of adequate space and ample food upon their arrival in the winter-free North, and those nonmigratory kinds, which stay behind to nest, are also assured of ample space for these activities.

### **Orientation and Navigation**

Evidence supports that the sun and stars are visual "landmarks" used by at least some birds as well as bees and probably many other creatures in finding their way home as well as to their winter and summer quarters.

Many cues are available to birds for migratory guidance and one or several of these may be used by any migrant. Different species and groups of birds use different cues, depending on their migration traits. Visual cues probably play a predominant role in migration. Radar studies have indicated that some birds can maintain their orientation even under completely overcast nights, although they usually become disoriented under such conditions. Long-distance migrants and pelagic species have a much higher developed sense of orientation than those species that migrate only short distances or not at all.

### **Perils of Migration**

The migration season is full of danger for birds. Untold thousands of smaller migrants are destroyed each year by storms and attacks by predatory animals. These mortality factors, and others, help keep bird populations in check.

## VOCABULARY LIST

**ZONING** - Any section of land restricted by law for a particular use

**ENVIRONMENTAL IMPACT** - Any significant effect of development upon the environment

**MUNICIPAL** - Relating to the internal affairs of a major political unit such as a city

**DEVELOPMENT** - Land that has been changed by people through agriculture, dredging, or the construction of roads and buildings

**CONSERVATION** - A careful usage and protection of our natural resources to insure their availability in the future

**WILDLIFE REFUGE MANAGEMENT** - Includes planning, repairing, and improving the animal habitats and educating people regarding the needs of wildlife - a challenge to provide for the most wildlife on the least amount of land

**AESTHETIC VALUE** - Placing a priority on the beauty of nature

**ETHICS** - A set of moral principles or values used in making choices

**HABITAT** - A balance of food, water, cover, and space that satisfies animals' needs for life

**FLYWAY** - A certain path that birds travel when migrating between nesting and wintering grounds

**ESTUARY** - A place where fresh water and salt water come together, making many food sources available to the wildlife there...e.g., bays and river mouths

**UPLANDS** - Slightly elevated dry land

**ADAPTATION** - Making physical or behavioral adjustments to changing environmental conditions

**BIRD BANDING** - Means of marking birds with metal bands to obtain data regarding their flight patterns, migration, habits, and life cycles - a way of tracking individual birds

**MIGRATION** - Movement of birds between their nesting and wintering grounds

**ECOLOGY** - The science of the interrelations between living organisms and their environment

**ECOSYSTEMS** - A system involving all interactions of living and non-living components of a given area

## CURRENT BOOK SELECTIONS

7-12

- Building An Aviary, Carl Naether and Matthew M. Vriends, 1989  
Birdwatch: A Young Person's Introduction to Birding,  
Mary MacPherson, 1989  
The Birder's Handbook, Paul Ehrlich, David Dobkin, and  
Darryl Wheye, 1988  
Bird Happy: Attracting and Feeding Birds, Wallace L. Howey, 1987  
Discovering Birds of Prey, Mike Thomas and Eric Soothill, 1986  
Families of Birds, Oliver L. Austin, 1985

### *Also see older books:*

- Field Guide to the Birds of North America, National Geographic Society, 1983  
Blackbird Singing, Eve Bunting, 1980  
A Field Guide to the Birds, Roger Tory Peterson, 1980  
Mysteries of Bird Migration, Allan C. Fisher, Jr. National Geographic,  
1979, pages 154-193  
Ducks, Geese and Swans of North America, Frank Bellrose, 1976  
A Heart to the Hawks, Don Moser, 1975  
The Peregrine Falcons, Alice Schuck, 1975  
Habitat Guide to Birding, Thomas P. McElroy, 1974  
In Search of a Sandhill Crane, Richard Cuffari, 1973  
Bird Navigation, G.V.T. Matthews, 1968  
Birds of North America, C. S. Robbins, Bertel Broun, and H. S. Zim, 1966  
The Golden Eagle, Robert Murphy, 1965  
Waterfowl Tomorrow, U. S. Department of the Interior, 1964